IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.   (Currently Amended) A method of providing macro mobility management for a mobile node in an access system comprising a plurality of mobile nodes, a first and a second access node serving said mobile nodes within ~~the~~ first and second parts of the access system, respectively, at least one first gateway node for interfacing said first part of the access system with external networks, and a first mobility entity which is associated with said at least one first gateway node and arranged to provide macro mobility management routing services to the mobile nodes while registered to the first part of the access system, said method comprising: ~~steps of~~

establishing a session between one of said plurality of mobile nodes and a second party via said first access node and said first mobility entity[[,]];

checking whether there is [[a]] at least one second mobility entity to which the first access node can establish a connection as an alternative for the first mobility entity and which is more preferred for the first access node in respect of routing than said first mobility entity; and

reacting to said checking by

A) maintaining a connection from said first access node to said first mobility entity if there is no second mobility entity which is more preferred than said first one, and

B) opening new connection from said first access node to said second mobility entity if said more preferred second mobility entity is available, and initiating macro mobility management registration.

2.   (Currently Amended) The method according to claim 1, comprising rerouting the session via said second access node in response to a movement of said one of mobile nodes to said second part of the access system.

3.   (Currently Amended) The method according to claim 1, comprising closing the connection from said first access node to said first mobility entity when said more preferred second mobility entity is available.

4. (Currently Amended) The method according to claim 1, wherein said macro mobility management is Internet Protocol-type, or IP-type mobility management, and wherein an agent advertisement message is sent from said second mobility entity to said one mobile node over said new connection, said agent ~~advertising~~ advertisement message enabling said one mobile node to detect a change of attachment point and to initiate mobile IP registration.

5. (Currently Amended) ~~The method according to claim 1, comprising~~ A method of providing macro mobility management for a mobile node in an access system comprising a plurality of mobile nodes, a first and a second access node serving said mobile nodes within a first and second parts of the access system, respectively, at least one first gateway node for interfacing said first part of the access system with external networks, and a first mobility entity which is associated with said at least one first gateway node and arranged to provide macro mobility management routing services to the mobile nodes while registered to the first part of the access system, said method comprising:

establishing a session between one of said plurality of mobile nodes and a second party via said first access node and said first mobility entity;

rerouting the session via said second access node in response to a movement of said one of mobile nodes to said second part of the access system;

storing in said second access node [[the]] an identity of [[said]] a preferred mobility entity of said second access node[[,]];

checking in said second access node, in response to a movement of said one mobile node from said first access node to said second access node, whether the identity of said first mobility entity and said stored identity of said preferred mobility entity match or not[[,]]; and

reacting to said checking by

A) maintaining a connection from said second access node to said first mobility entity if the identities match, and

B) closing [[the]] a connection from said second access node to said first mobility entity and opening a new connection to said preferred mobility entity if said identities do not match, and initiating macro mobility management registration.

6. (Currently Amended) The method according to claim ~~1~~ 5 in a radio access system, wherein said ~~steps of~~ closing and opening of the connection comprise ~~steps of~~ closing and opening of [[a]] one or more packet protocol ~~context~~ contexts.

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7.   (Currently Amended) The method according to claim 6, comprising transferring the packet protocol contexts of a mobile station which the mobile node is associated with from the first access node to the second access node, along with information which indicates which one or ones of the packet radio protocol contexts relate to the macro mobility management[[,]];

distinguishing the macro mobility management related packet protocol context(s) contexts from possible other packet protocol contexts on the basis of said information at the second access node[[,]]; and

performing said steps of opening and closing solely on the macro mobility management related packet protocol context(s) contexts.

8.   (Currently Amended) The method according to claim 1 5, wherein said preferred mobility entity of said second access node is a foreign agent associated with a gateway node in said second part of the access network system.

9.   (Currently Amended) The method according to claim 1, wherein said identity includes the an address of the mobility entity.

10.   (Currently Amended) An access system, comprising
a plurality of mobile nodes[[,]];
a first and a second access node serving said mobile nodes within the first and second parts of the access system, respectively[[,]];
at least one first gateway node for interfacing said first part of the access system with external networks[[,]];
a first mobility entity which is associated with said at least one first gateway node and arranged to route a connection to any one of said mobile nodes while said mobile node is registered to the first part of the access system[[,]];
a mechanism which checks whether there is a second mobility entity which is more preferred in respect of routing than said first mobility entity for said one access node[[,]]; and
a mechanism which opens a new connection from one of said access nodes to said second mobility entity if said more preferred second mobility entity is available according to said checking,

said mobile node being arranged to detect a change of attachment by means of said new connection and to initiate macro mobility management registration.

11.   (Currently Amended) ~~The system according to claim 10, comprising~~ An access system, comprising

a plurality of mobile nodes;

a first and a second access node serving said mobile nodes within a first and second parts of the access system, respectively;

at least one first gateway node for interfacing said first part of the access system with external networks;

a first mobile entity which is associated with said at least one first gateway node and arranged to route a connection to any one of said mobile nodes while said mobile node is registered to the first part of the access system;

a rerouting mechanism by which said connection initially routed via said first access node and said first mobility entity can be ~~routed~~ rerouted via said second access node in response to a movement of said one of mobile nodes to said second part of the access system;

a mechanism which checks whether there is a second mobility entity which is more preferred in respect of routing than said first mobile entity; and

a mechanism which opens a new connection from said second access node to said second mobility entity if said more preferred second mobility entity is available according to said checking,

said mobile node comprising a mechanism which detects a change of attachment by means of said new connection and to initiate macro mobility management registration.

12.   (Currently Amended) The system according to claim ~~10~~ 11, comprising a mechanism which closes a connection to said first mobility entity when said more preferred second mobility entity is available according to said checking.

13.   (Currently Amended) The system according to claim ~~10~~ 11, comprising said macro mobility management being Internet Protocol-type, or IP-type, mobility management,

said second mobility entity being arranged to send an entity advertisement message to said one mobile node over said new connection,

said mobile node being arranged to detect a change of attachment by means of said entity advertising message and to initiate mobile IP registration.

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14.   (Currently Amended) The system according to claim ~~10~~ 11, wherein said preferred mobility entity of said second access node is a foreign agent associated with a gateway node in said second part of the access ~~network~~ system.

15.   (Currently Amended) The system according to claim ~~10~~ 11, wherein said second access node is arranged to make said checking.

16.   (Currently Amended) The system according to claim 15, wherein the second access node is arranged to store the identity, such as an address, of the preferred foreign agent for the checking purposes.

17.   (Previously Presented) The system according to claim 10, wherein said closing and opening of the connection comprise closing a packet protocol context in the gateway node of the first mobility entity and opening a packet protocol context in the gateway node of the preferred mobility entity.

18.   (Currently Amended) The system according to claim 17, wherein said maintaining of the connection comprises updating of a packet protocol context of the mobile node [[(in)]] in the gateway node of the first mobility entity.

19.   (Currently Amended) The system according to claim 17, wherein packet protocol contexts of a mobile station which the mobile node is associated with are associated with information which indicates which one or ones of the packet protocol contexts relate to the macro mobility management, and wherein the access node is arranged to distinguish the macro mobility management related packet protocol ~~context(s)~~ contexts from possible other packet protocol contexts on the basis of said information and to said ~~steps of~~ opening and closing solely on the macro mobility management related packet protocol ~~context(s)~~ contexts.

20.   (Currently Amended) The system according to claim 19, wherein said information is provided in a message transferring the packet protocol ~~context(s)~~ contexts from said other access node to said access node.

21.   (Currently Amended) An access node for an access system comprising a plurality of mobile nodes, access nodes serving said mobile nodes within respective parts of the access system, at least two gateway nodes for interfacing the access system with external networks, and at least two mobility entities which are associated with different ones of said at least two gateway nodes and arranged to provide macro mobility management routing services to the mobile nodes while registered to the access system, said access node comprising:

means for checking, when a mobile node having a connection through another access node and a first mobility entity is accessing the system via said access node, whether there is another mobility entity which is more preferred in respect of routing than said first mobility entity, and

means responsive to said checking means for opening a new connection to said preferred other mobility entity if said more preferred other mobility entity is available.

22.   (Original) The access node according to claim 21, comprising means for closing a connection to said first mobility entity when said more preferred other mobility entity is available.

23.   (Currently Amended) ~~The access node according to claim 21, wherein said checking means comprises~~ An access node for an access system comprising a plurality of mobile nodes, access nodes serving said mobile nodes within respective parts of the access system, at least two gateway nodes for interfacing the access system with external networks, and at least two mobility entities which are associated with different ones of said at least two gateway nodes and arranged to provide macro mobility management routing services to the mobile nodes while registered to the access system, said access node comprising:

means for storing the identity, such as an address, of said preferred other mobility entity of said access node [[.]];

means for checking, in response to a movement of said mobile node ~~(MS/MN)~~ from ~~said other~~ another access node to said access node whether the identity of [[said]] a first mobility entity used by said other access node and said stored identity of said preferred mobility entity match or not[[,]]; and

a mechanism which opens a new connection to said preferred other mobile entity, if said preferred other mobile entity is available.

24.   (Currently Amended) ~~The access node according to claim 22, wherein said closing and opening means comprise~~ An access node for an access system comprising a plurality of mobile nodes, addess nodes serving said mobile nodes within respective parts of the access system, at least two gateway nodes for interfacing the access system with external networks, and at least two mobility entities which are associated with different ones of said at least two gateway nodes and arranged to provide macro mobility management routing services to the mobile nodes while registered to the access system, said access node comprising:

a memory which stores an identity, such as an address, of a preferred mobile entity of said access node;

a mechanism which checks, in response to a movement of said mobile node from another access node to said access node whether the identity of a first mobility entity used by said other access node and said stored identity of said preferred mobility entity match or not;

means for maintaining a connection to said first mobility entity if the identities match[[,]]; and

means for closing the connection to said first mobility entity and opening new connection to said preferred mobility entity if said identities do not match.

25.   (Previously Presented) The access node according to claim 22, wherein said access system is a radio access system, and wherein said means for closing and opening of the connection comprise means for closing a packet protocol context in the gateway node of the first mobility entity and opening a packet protocol context in the gateway node of the preferred mobility entity.

26.   (Original) The access node according to claim 25, wherein said means for maintaining the connection comprise means for updating a packet protocol context of the mobile node in the gateway node of the first mobility entity.

27.   (Currently Amended) The access node according to claim 25, wherein packet protocol contexts of a mobile station which the mobile node is associated with are associated with information which indicates which one or ones of the packet protocol contexts relate to the macro mobility management, and wherein the access node is arranged to distinguish the macro mobility management related packet protocol ~~context(s)~~ contexts from possible other

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packet protocol contexts based on said information and to perform said steps of opening and closing solely on the macro mobility management related packet protocol ~~context(s)~~ contexts.

28.   (Currently Amended) The access node according to claim 27, wherein said information is provided in a message transferring the packet protocol ~~context(s)~~ contexts from said other access node to said access node.

29.   (Previously Presented) The access node according to claim 21, wherein said macro mobility management is Internet Protocol-type, or IP-type, mobility management.

30.   (New) An access node for an access system comprising a plurality of mobile nodes, access nodes serving said mobile nodes within respective parts of the access system, at least two gateway nodes for interfacing the access system with external networks, and at least two mobility entities which are associated with different ones of said at least two gateway nodes and arranged to provide macro mobility management routing services to the mobile nodes while registered to the access system, said access node comprising:
    a memory which stores an identity, such as an address, of a preferred mobility entity of said access node;
    a mechanism which checks, in response to a movement of said mobile node from another access node to said access node whether the identity of said first mobility entity used by said other access node and said stored identity of said preferred mobility entity match or not;
    a mechanism which maintains a connection to said first mobility entity if the identities match, by maintaining a packet protocol context in the gateway node associated with the first mobility entity; and
    a mechanism which closes the connection to said first mobility entity by closing a packet protocol context in the gateway node associated with the first mobility entity, and opens a new connection to said preferred mobility entity by opening a packet protocol context in a gateway node associated with the preferred mobility entity, if said identities do not match.

31.   (New) An access node for an access system comprising a plurality of mobile nodes, access nodes serving said mobile nodes within respective parts of the access system, at least two gateway nodes for interfacing the access system with external networks, and at least

two mobility entities which are associated with different ones of said at least two gateway nodes and arranged to provide macro mobility management routing services to the mobile nodes while registered to the access system, said access node comprising:

a memory which stores information on a preferred one of said mobility entities for said access node;

a first mechanism which checks, in response to a movement of said mobile node from another access node to said access node whether a first mobility entity used by another access node corresponds to said preferred mobility entity according to said stored information;

a second mechanism which maintains a connection to said first mobility entity if said first mobility entity corresponds to said preferred mobility entity according to said stored information, by maintaining a packet protocol context providing a connection from the access node to the first mobility entity; and

a third mechanism which closes the connection to said first mobility entity by closing a packet protocol context providing a connection to the first mobility entity, and opens a new packet protocol context providing a new connection to said preferred mobility entity, if said first mobility entity does not correspond to said preferred mobility entity according to said stored information.

32.   (New) An access node according to claim 31, wherein the packet protocol context of the mobile node is associated with information which indicates which one or ones of the packet protocol contexts relate to the macro mobility management, and wherein the access node comprises a fourth mechanism which distinguishes a macro-mobility-management-related packet protocol context from possible other packet protocol contexts on the basis of said information, said first, second and third mechanisms being enabled only for the macro-mobility-management-related packet protocol context.

33.   (New) An access node for an access system comprising a plurality of mobile nodes, access nodes serving said mobile nodes within respective parts of the access system, at least two gateway nodes for interfacing the access system with external networks, and at least two foreign agents which are associated with different ones of said at least two gateway nodes and arranged to provide macro mobility management routing services to the mobile nodes while registered to the access system, said access node comprising:

a memory which stores information on preferred one of said foreign agents for said access node;

a first mechanism which checks, in response to a movement of said mobile node from another access node to said access node whether a first foreign agent used by said other access node corresponds to said preferred mobility entity according to said stored information;

a second mechanism which maintains a connection to said first mobility entity if said first foreign agent corresponds to said preferred foreign agent according to said stored information, by maintaining a packet protocol context providing a connection from the access node to the first foreign agent; and

a third mechanism which closes the connection to said first foreign agent by closing a packet protocol context providing a connection to the first foreign agent, and opens a new packet protocol context providing a new connection to said preferred foreign agent, if said first foreign agent does not correspond to said preferred foreign agent according to said stored information.

34.   (New) A packet radio support node for a packet radio access system comprising a plurality of mobile nodes, packet radio support nodes serving said mobile nodes within respective parts of the access system, at least two gateway nodes for interfacing the packet radio access system with external networks, and at least two foreign agents which are associated with different ones of said at least two gateway nodes and arranged to provide macro mobility management routing services to the mobile nodes while registered to the packet radio access system, said packet radio support node comprising:

a memory which stores information on preferred one of said foreign agents for said packet radio support node;

a first mechanism which checks, in response to a movement of said mobile node from another packet radio support node to said packet radio support node whether a first foreign agent used by said other packet radio support node corresponds to said preferred foreign agent according to said stored information;

a second mechanism which maintains a connection to said first foreign agent if said first foreign agent corresponds to said preferred foreign agent according to said stored information, by maintaining a packet protocol context providing a connection from the packet radio support node to the first foreign agent; and

a third mechanism which closes the connection to said first foreign agent by closing a packet protocol context providing a connection to the first foreign agent, and opens a new packet protocol context providing a new connection to said preferred foreign agent, if said first foreign agent does not correspond to said preferred foreign agent according to said stored information.

35.   (New) A packet radio support node for a packet radio access system comprising a plurality of mobile nodes, packet radio support nodes serving said mobile nodes within respective parts of the access system, at least two gateway nodes for interfacing the packet radio access system with external networks, and at least two foreign agents which are associated with different ones of said at least two gateway nodes and arranged to provide macro mobility management routing services to the mobile nodes while registered to the packet radio access system, said packet radio support node comprising:

means for checking, when a mobile node having a connection through another packet radio access node and a first foreign agent is accessing the system via said packet radio access node, whether there is another foreign agent which is more preferred for said packet radio access node in respect of routing than said first foreign agent; and

means responsive to said checking means for opening a new connection to said preferred other foreign agent if said more preferred other foreign agent is available.